

Application No. 10/517,002  
Paper Dated: January 4, 2010  
In Reply to USPTO Correspondence of September 3, 2009  
Attorney Docket No. 4544-045655

**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions and listings of claims in the application.

**Listing of Claims**

Claims 1-10 (Cancelled).

Claim 11 (Currently Amended): An electrochemically reacting composition comprising active materials aluminum, magnesium and iron, a filler material, a hydrogen scavenger, an additive and an electrolyte;

wherein said magnesium comprises 10-90% by weight of said active materials,  
wherein said aluminum comprises 10-90% by weight of said active materials,  
wherein said iron comprises 0-15% by weight of said active materials,  
wherein said filler material comprises 5-50% by weight of said active materials,  
wherein said hydrogen scavenger comprises is potassium permanganate and it  
comprises 5-30% by weight of said active materials, and  
wherein said additive comprises 0-20% by weight of said active materials.

Claim 12 (Previously Presented): The composition as claimed in claim 11, wherein said magnesium comprises 15-50% by weight with a particle size varying from 1-500  $\mu\text{m}$ .

Claim 13 (Previously Presented): The composition as claimed in claim 11, wherein said aluminum comprises 40-75% by weight with a particle size varying from 2-100  $\mu\text{m}$ .

Claim 14 (Previously Presented): The composition as claimed in claim 11, wherein said iron comprises 7-12% by weight with a particle size varying from 20-200  $\mu\text{m}$ .

Claim 15 (Previously Presented): The composition as claimed in claim 11, wherein said filler comprises 5-25% by weight of said active materials.

Claim 16 (Previously Presented): The composition as claimed in claim 11, wherein said hydrogen scavenger comprises 5-20% by weight of the said active materials.

Claim 17 (Previously Presented): The composition as claimed in claim 11, wherein said additive comprises 0-10% by weight of said active materials.

Claim 18 (Cancelled).

Claim 19 (Previously Presented): The composition as claimed in claim 11, wherein said electrolyte is a salt of strong active and strong or weak base.

Claim 20 (Currently Amended): ~~The A composition as claimed in claim 11, wherein the composition is prepared by the a process comprising the following steps:~~

- (i) preparing active materials by placing commercially available 10-90% magnesium by weight of the entire active materials, having particle size varying from 1-500  $\mu\text{m}$ , 10-90% aluminum by weight of the entire active materials, having particle size varying from 2-100  $\mu\text{m}$ , and 0-15% iron weight wise of the entire active materials and having particle size varying from 20-200 in the container of a conventional ball mill;
- (ii) adding to said active materials a filler material 5-50% weight wise over the weight of the said active materials;
- (iii) ball milling the mix of said active materials and the said filler material for about 4-6 hours and transferring the entire mix to another container after completion of the ball milling operation;
- (iv) adding a hydrogen scavenger 5-30% weight wise over the entire weight of the active materials and mixing thoroughly to obtain a homogenous mix;

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- (v) adding an additive 2-20% weight wise over the entire active materials to the homogenous mix obtained from step (iv);
- (vi) adding any salt of strong acid and strongly or weak base 2-10% weight wise over the weight of the entire active materials to the mix obtained from step (v);
- (vii) compacting of the entire mix obtained from step (v) through a conventional pressing machine and giving it a desirable shape such as strip or pellet; and
- (viii) storing the compacted and cut electrochemical heat source in air tight containers such as pouch to avoid ingress of water.

Claim 21 (Previously Presented): The composition as claimed in claim 19, wherein said salt is selected from the group consisting of potassium chloride, sodium chloride and ferrous sulphate.

Claim 22 (Previously Presented): The composition as claimed in claim 11, wherein said filler is selected from the group consisting of silica sand and an organic filler.

Claim 23 (Previously Presented): The composition as claimed in claim 22, wherein said organic filler is polyethylene or polypropylene.

Claim 24 (Previously Presented): The composition of claim 20, wherein said composition comprises the following amounts of constituents by weight of the active materials: magnesium 15-50%, aluminum 40-75%, iron 7-12%, filler 5-25%, hydrogen scavenger 5-20%, additive 2-10%, and salt 5-10%.

Claim 25 (Previously Presented): The composition of claim 20, wherein step (iii) is carried out in an inert argon atmosphere.